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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,057	11/19/2003	Hidenobu Hamada	2003_1676A	4262
513	7590	06/06/2005	EXAMINER	
WENDEROTH, LIND & PONACK, L.L.P.			HEALY, BRIAN	
2033 K STREET N. W.				
SUITE 800			ART UNIT	
WASHINGTON, DC 20006-1021			PAPER NUMBER	
			2883	

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/716,057

Applicant(s)

HAMADA, HIDENOBU

Examiner

Brian M. Healy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 45-61 is/are allowed.
- 6) ☒ Claim(s) 1, 5, 34-37, 43 and 44 is/are rejected.
- 7) ☒ Claim(s) 2-4, 6-33 and 38-42 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 05242005 02 02 2005

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: Brian Healy

**FOREIGN PRIORITY**

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in JAPAN on 11/29/2002.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 5, 34-37, 43, and 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Leuthold, U.S.P. No. 6,580,844.

Leuthold 844' teaches (Figs.1-5b, note especially Fig.5a) an optical demultiplexer for separating wavelength multiplexed light signals from light emitters and received by light detectors comprising: an input portion (or n input sections) 503 for inputting multiplexed multiwavelength signals (1.3  $\mu\text{m}$  and 1.55 $\mu\text{m}$ ) to an multi-mode propagation portion waveguide 504 for separating and maximizing light to first and second output waveguides (or other n number of output waveguides) 505,506 (It is inherent even though it is not explicitly stated that the ratio of the output powers i.e. the extinction ratio is maximized along with the maximized optical output signals) Fig.4 teaches the amount of power by wavelength which can either be maximized or cut-off. The teachings of Leuthold 844' clearly, fully meets Applicant's claimed limitations.

#### **ALLOWABLE SUBJECT MATTER**

Claims 2-4, 6-33, and 38-42 are objected to as being dependent upon a rejected base claim, but would be allowable in rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the references of record teaches or suggests the specifically recited parameters for extinction ratio, refractive index, width, phase difference between modes, first and second latter stage multi-mode propagation sections, electrode control sections provided on the MMI waveguide and external temperature control means (See dependent claims for specific limitations).

Claims 45-61 are allowed over the prior art of record. None of the references of record teaches or suggests the specifically recited parameters for extinction ratio, polarization, refractive index, width, phase difference between modes, first and second latter stage multi-mode propagation sections, relay or drop waveguides and electrode control sections provided on the MMI waveguide, (see claims 45-61 for specific details).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Day et. al., U.S.P. No. 6,266,464 (Figs.1-15), Shiba et. al., U.S. 2002/0053678A1 (Figs.1-8), Jenkins, U.S.P. No. U.S. 2004/0247235A1 (Figs.1-6) and Kish, Jr. et. al., U.S. 2005/0013330 A1 (Figs.1-24).

All of the prior art documents submitted by applicant in the Information Disclosure Statement filed on FEBRUARY 2, 2005, have been considered and made of record. Note the attached initialed copy of form PTO-1449.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian M. Healy whose telephone number is (571)272-2347. The examiner can normally be reached on Compressed schedule Tues-Thurs. 7AM-4:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571)272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Brian M. Healy**  
**Primary Examiner**  
**Art Unit 2883**

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A handwritten signature in black ink, appearing to read 'Brian Healy', with a stylized flourish at the end.

**Brian Healy**  
**Primary Examiner**